## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Constantin Bulucea and Rebecca Rossen

Assignee:

Siliconix Incorporated

Title:

TRENCH DMOS POWER TRANSISTOR WITH FIELD-SHAPING BODY PROFILE AND THREE-DIMENSIONAL GEOMETRY

Serial No.:

Filed: Herewith

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San Jose, California July 2, 1993

COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D. C. 20231

Preliminary Amendment

Sir:

Please amend the above-mentioned Application as follows:

In the Claims

Please cancel Claims 1-16.

Please add Claims 17-29 as follows:

17. A trench DMOS transistor cell, comprising:

a substrate of a first conductivity;

an epitaxial layer of said first conductivity formed on the surface of said substrate, said epitaxial layer having a top surface and a bottom surface;

a body region of/a second conductivity formed in said epitaxial layer, satd body region extending, as measured from said top surface of said epitaxial layer, to a first depth d<sub>max</sub> at a first/point and to a depth of d at a second point, where d is less than dmax, said first and second point being separated by a predetermined horizontal distance;

a source region of said first conductivity formed in said expitaxial layer above said body region; and

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